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APPLICATION NO.	FILING DATE	FIRST NAMED INVENTOR	ATTORNEY DOCKET NO.	CONFIRMATION NO.
10/696,242	10/29/2003	Earl James Hayes	003C.0028.U1(US)	7035

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EXAMINER

ENGLISH, PETER C

ART UNIT PAPER NUMBER

3616

DATE MAILED: 03/09/2005

Please find below and/or attached an Office communication concerning this application or proceeding.

Office Action Summary

Application No.

10/696,242

Applicant(s)

HAYES ET AL.

Examiner

Peter C. English

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-- The MAILING DATE of this communication appears on the cover sheet with the correspondence address --

Period for Reply

A SHORTENED STATUTORY PERIOD FOR REPLY IS SET TO EXPIRE 3 MONTH(S) FROM THE MAILING DATE OF THIS COMMUNICATION.

- Extensions of time may be available under the provisions of 37 CFR 1.136(a). In no event, however, may a reply be timely filed after SIX (6) MONTHS from the mailing date of this communication.
- If the period for reply specified above is less than thirty (30) days, a reply within the statutory minimum of thirty (30) days will be considered timely.
- If NO period for reply is specified above, the maximum statutory period will apply and will expire SIX (6) MONTHS from the mailing date of this communication.
- Failure to reply within the set or extended period for reply will, by statute, cause the application to become ABANDONED (35 U.S.C. § 133). Any reply received by the Office later than three months after the mailing date of this communication, even if timely filed, may reduce any earned patent term adjustment. See 37 CFR 1.704(b).

Status

- 1) ☐ Responsive to communication(s) filed on ____.
- 2a) ☐ This action is **FINAL**. 2b) ☒ This action is non-final.
- 3) ☐ Since this application is in condition for allowance except for formal matters, prosecution as to the merits is closed in accordance with the practice under *Ex parte Quayle*, 1935 C.D. 11, 453 O.G. 213.

Disposition of Claims

- 4) ☒ Claim(s) 1-23 is/are pending in the application.
- 4a) Of the above claim(s) ____ is/are withdrawn from consideration.
- 5) ☒ Claim(s) 15 and 16 is/are allowed.
- 6) ☒ Claim(s) 1-7, 9, 11-14 and 17-23 is/are rejected.
- 7) ☒ Claim(s) 8 and 10 is/are objected to.
- 8) ☐ Claim(s) ____ are subject to restriction and/or election requirement.

Application Papers

- 9) ☒ The specification is objected to by the Examiner.
- 10) ☒ The drawing(s) filed on 29 October 2003 is/are: a) ☐ accepted or b) ☒ objected to by the Examiner.
Applicant may not request that any objection to the drawing(s) be held in abeyance. See 37 CFR 1.85(a).
Replacement drawing sheet(s) including the correction is required if the drawing(s) is objected to. See 37 CFR 1.121(d).
- 11) ☐ The oath or declaration is objected to by the Examiner. Note the attached Office Action or form PTO-152.

Priority under 35 U.S.C. § 119

- 12) ☐ Acknowledgment is made of a claim for foreign priority under 35 U.S.C. § 119(a)-(d) or (f).
- a) ☐ All b) ☐ Some * c) ☐ None of:
- ☐ Certified copies of the priority documents have been received.
 - ☐ Certified copies of the priority documents have been received in Application No. ____.
 - ☐ Copies of the certified copies of the priority documents have been received in this National Stage application from the International Bureau (PCT Rule 17.2(a)).

* See the attached detailed Office action for a list of the certified copies not received.

Attachment(s)

- 1) ☒ Notice of References Cited (PTO-892)
- 2) ☐ Notice of Draftsperson's Patent Drawing Review (PTO-948)
- 3) ☒ Information Disclosure Statement(s) (PTO-1449 or PTO/SB/08)
Paper No(s)/Mail Date 20031029.
- 4) ☐ Interview Summary (PTO-413)
Paper No(s)/Mail Date. ____.
- 5) ☐ Notice of Informal Patent Application (PTO-152)
- 6) ☐ Other: ____.

DETAILED ACTION

Drawings

1. The drawings are objected to as failing to comply with 37 CFR 1.84(p)(5) because they include the following reference sign(s) not mentioned in the description:

Reference numbers 1-16 shown in Fig. 2. Note that reference numbers 10, 12, 14 and 16 are used to label different elements in Fig. 1. Each reference number should be used for a single corresponding element.

Reference letter A used to label a section line in Fig. 2. Furthermore, the section line should be labeled with numbers corresponding to the view number that shows the corresponding cross section.

2. The drawings are objected to because:

Figs. 3, 4, 5 and 11 contain solid shading which is not permitted.

Figs. 4 and 11 contain extraneous text.

3. Corrected drawings are required in reply to the Office action to avoid abandonment of the application. Drawing changes must be made by presenting replacement figures which incorporate the desired changes and which comply with 37 CFR 1.84. The correction to the drawings will not be held in abeyance.

Specification

4. The abstract of the disclosure is objected to because it does not fully descriptive of the claimed invention since the air bag system is not mentioned. Correction is required. See MPEP § 608.01(b).

5. The specification is objected to because:

In paragraph 32, at line 2, "52" should be "50".

In paragraph 34, at line 1, "4" should be "5".

In paragraph 34, at line 2, "92" should be "94".

In paragraph 34, at line 12, "24" should be "94".

In paragraph 36, at line 6, "98" should be "78".

In paragraph 39, at line 7, "Z" should be "47". See Fig. 7.

Appropriate correction is required.

Claim Objections

6. Claims 20-23 are objected to because of the following informalities:

In claim 20, at line 8, "member" should be inserted after "housing". See claim 15, line 8.

In claim 21, at line 2, "the" should be inserted before "steps".

Appropriate correction is required.

Claim Rejections - 35 USC § 112

7. Claims 2-7, 11-14, 17-20 and 22 rejected under 35 U.S.C. 112, second paragraph, as being indefinite for failing to particularly point out and distinctly claim the subject matter which applicant regards as the invention.

In claim 2, at line 2, "general tube section" is indefinite because it is unclear what constitutes a "general" tube. Does this term refer to a section that is generally tubular? Note the occurrence of this term at: claim 3, line 2; claim 4, line 5; claim 5, lines 4 and 6; and claim 7, line 2.

In claim 4, at line 2, "a second housing member" is indefinite because no "first" housing member has been previously recited.

In claim 11, at lines 6-7, "the flexible printed circuit" lacks proper antecedent basis. The examiner suggests: in claim 11, at line 7 and in claim 14, at line 6, insert "mat" after "circuit".

In claim 14, at line 6, "the conductors" lacks proper antecedent basis. Note that this term is introduced in claim 13.

In claim 17, at lines 2-3, "general tube section" is indefinite because it is unclear what constitutes a "general" tube. Does this term refer to a section that is generally tubular? Note the occurrence of this term at: claim 18, line 2; claim 19, line 3; and claim 20, lines 4 and 6.

In claim 22, at line 4, "the electrical leads" lacks proper antecedent basis.

Claim Rejections - 35 USC § 103

8. The following is a quotation of 35 U.S.C. 103(a) which forms the basis for all obviousness rejections set forth in this Office action:

(a) A patent may not be obtained though the invention is not identically disclosed or described as set forth in section 102 of this title, if the differences between the subject matter sought to be patented and the prior art are such that the subject matter as a whole would have been obvious at the time the invention was made to a person having ordinary skill in the art to which said subject matter pertains. Patentability shall not be negated by the manner in which the invention was made.

9. This application currently names joint inventors. In considering patentability of the claims under 35 U.S.C. 103(a), the examiner presumes that the subject matter of the various claims was commonly owned at the time any inventions covered therein were made absent any evidence to the contrary. Applicant is advised of the obligation under 37 CFR 1.56 to point out the inventor and invention dates of each claim that was not commonly owned at the time a later invention was made in order for the examiner to consider the applicability of 35 U.S.C. 103(c) and potential 35 U.S.C. 102(e), (f) or (g) prior art under 35 U.S.C. 103(a).

10. Claims 1, 2, 9, 11, 14, 21 and 23 are rejected under 35 U.S.C. 103(a) as being unpatentable over Young et al. (US 2004/0262957) or Saunders et al. (US 2003/0220766) in view of Lim (US 5,959,557). Young et al. discloses a seat sensor for an air bag system (see paragraph 16) comprising: a second housing member 52 telescopically connected to a first housing member 30, 50; a Hall effect sensor 40 supported by the first housing member 30, 50; a magnet 58 supported by the second housing member 52; and a spring 56 biasing the magnet 58 away from the Hall effect sensor 40. Saunders et al. also teaches a seat sensor for an air bag system (see paragraph 35) comprising: a second housing member 118 telescopically connected to a first housing member 113, 120; a Hall effect sensor 122 supported by the first housing member 113, 120; a magnet 126 supported by the second housing member 118; and a spring 111 biasing the magnet 126 away from the Hall effect sensor 122.

Young et al. and Saunders et al. both lack a housing member overmolded onto the Hall effect sensor. Lim teaches a housing member 15 overmolded onto a Hall effect sensor 18 (see column 3, lines 12-15). From this teaching of Lim, it would have been obvious to one of ordinary

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skill in the art at the time the invention was made to modify Young et al. or Saunders et al. by overmolding the first housing member onto the Hall effect sensor in order to hermetically seal the Hall effect sensor, thereby preventing the sensor from being adversely effected by its environment (see Lim, column 1, lines 42-54, and column 4, lines 39-43).

Allowable Subject Matter

11. Claims 3-7, 12, 13 and 22 would be allowable if rewritten to overcome the rejection(s) under 35 U.S.C. 112, second paragraph, set forth in this Office action and to include all of the limitations of the base claim and any intervening claims.

12. Claims 8 and 10 are objected to as being dependent upon a rejected base claim, but would be allowable if rewritten in independent form including all of the limitations of the base claim and any intervening claims.

13. Claims 15 and 16 allowed.

14. Claims 17-20 would be allowable if rewritten or amended to overcome the rejection(s) under 35 U.S.C. 112, second paragraph, set forth in this Office action.

15. The following is a statement of reasons for the indication of allowable subject matter:
Claim 15 defines over the art of record because of the limitations found in the last paragraph of the claim.

Conclusion

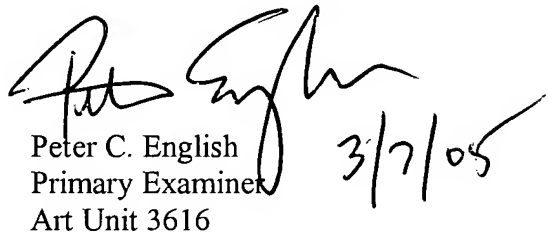
16. The prior art made of record and not relied upon is considered pertinent to applicant's disclosure. Sullivan et al. teaches a Hall effect sensor. Maeda teaches a magnet-operated sensor within a telescopic housing.

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17. Any inquiry concerning this communication or earlier communications from the examiner should be directed to Peter C. English whose telephone number is 703-308-1377. The examiner can normally be reached on Monday through Thursday (7:00 AM - 5:00 PM).

If attempts to reach the examiner by telephone are unsuccessful, the examiner's supervisor, Paul N. Dickson can be reached on 703-308-2089. The fax phone numbers for the organization where this application or proceeding is assigned are 703-872-9326 for regular communications and 703-872-9327 for After Final communications.

Any inquiry of a general nature or relating to the status of this application or proceeding should be directed to the receptionist whose telephone number is 703-308-1113.


Peter C. English
Primary Examiner
Art Unit 3616 3/7/05

pe
March 7, 2005